THE BRIDGING FUNCTION OF INTERPERSONAL COMMUNICATION IN AGENDA-SETTING

By David H. Weaver, Jian-Hua Zhu and Lars Willnat

This study concerns the agenda-setting effects of people's mediated and unmediated experiences with one social issue — drug abuse — during the fall of 1989. Like the 1987 Mutz study of unemployment, this study explores what kinds of information lead to whether a problem such as drug abuse is perceived as a personal or a social problem. We find, as Mutz did for the issue of unemployment, a unique "bridging" influence of interpersonal communication between personal and social perceptions of the salience of drug abuse, and we offer an explanation for why interpersonal communication has this influence, whereas personal experience and media exposure do not.

Agenda-setting research generally has found a positive association between mass media coverage devoted to an issue and the placement of that issue on the public agenda. However, as Wright has pointed out, "social processes other than mass communication also affect the public's judgment of an issue or person as important. For one thing, people talk to one another about social issues, and these conversations may play an important part in their judgments."

So far, relatively few agenda-setting studies have tried to examine the role of non-media sources of information in the creation and maintenance of issue salience. Lasorsa and Wanta, for example, found that personal experience and mass mediated information led to "media conformity" on various issues, while interpersonal communication had no significant effect. In another study, which appears in this issue of Journalism Quarterly, Wanta et al. found that interpersonal communication enhanced agenda-setting effects for issues which had received extensive media coverage in the weeks before their survey, but inhibited agenda-setting effects for issues which got little coverage during the same time.

David H. Weaver is the Roy W. Howard Research Professor at the School of Journalism, Indiana University, where Lars Willnat was a doctoral student. He is now a lecturer in journalism and communication at the Chinese University of Hong Kong. Jian-Hua Zhu, who received his Ph.D. in mass communication from Indiana, is assistant professor of communication at the University of Connecticut. The authors appreciate the support of the Indiana University Computing Services, the Center for Survey Research and the Roy W. Howard Chair.
Our study concerns the agenda-setting effects of three different sources of information on a single issue — drug abuse in the state of Indiana during 1989. Replicating the Mutz study of unemployment, conducted in Indiana during the summer and fall of 1987, we argue that, depending on the type of information source (personal, interpersonal or mass media), communication can affect the perception of drug abuse as either a personal or a social problem.

We also test the hypothesis that interpersonal communication plays a unique "bridging" function in influencing both levels of perception, whereas personal experience and mass media coverage each influence only one level of perceived salience of an issue (See Fig. 1). We expect this to be so not only because Mutz found this pattern for the issue of unemployment, but also because previous research involving interpersonal communication has suggested that societal-level perceptions develop from the interactions among people as well as from less personal forms of communication such as the mass media. Interpersonal communication also affects personal-level perceptions by bringing the experiences and opinions of others to bear directly on personal problems.

Parallel to Mutz, three possible sources of information for the problem of drug abuse were examined: (1) people's personal experiences with it in their immediate families, (2) the experiences of their friends and acquaintances that they hear about through interpersonal communication, and (3) mass media coverage of the drug abuse problem. To document information source effects on people's perceptions of drug abuse, we coupled content analysis of newspaper coverage of this problem with survey data.

Studies examining the effect of personal experience on the agenda-setting function of the media have generally found that those people who are most personally involved with mass mediated issues are also the most sensitive to the media's agenda.

5. Ibid.
Mutz points out that in the case of perceptions of economic issues such as unemployment, however, much evidence from contemporary communication research would caution against attributing the origins of such perceptions to mass media. She argues that the key factor weakening the case for mass media effects on perceptions of economic issues is that such issues have "real world" consequences. That is, people can use personal experiences to override potential media effects.

Mutz also cites media "dependency theory" as minimizing the potential for media effects in situations where alternative information sources are available. And she notes the explanations for differences among issues in agenda-setting studies that are based on the "obtrusiveness" of the issue, where personal experiences are considered "superior" information sources that may diminish the influences of mass media or interpersonal communication.

Based on these studies, our first hypothesis is:
1. Personal experience with drug abuse will be a positive predictor of perceptions of drug abuse as a personal problem, but not as a social problem.

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8Mutz, op. cit.
Information is conveyed not only through media reports or direct personal experiences, but also through structured patterns of social interaction. In his review of interpersonal communication channels, Chaffee\(^{12}\) argues that "when we seek information it is often for corroboration or comparison with prior constructions of reality, and we seek it through those channels that are most accessible to us and are likely to have something additional to say on the subject. Whether these are media or interpersonal channels depends largely on the topic, timing and immediate accessibility."\(^{13}\)

Beinstein\(^{14}\) found that women with relatively loose-knit networks tended to mention the mass media rather than other people as information sources about the two problems of most concern to them, but a fifth of these women still cited interpersonal sources and a third mentioned both interpersonal and media sources. Nearly half of those with close-knit social networks mentioned both interpersonal and media sources, reinforcing the interrelatedness of interpersonal and media channels of information.

Although "the more people talk with one another about information from the mass media, the greater is the total impact of the media on social action,"\(^{15}\) the nature of the relationship between media agenda-setting and the respondents' involvement in interpersonal communication is less clear. Some studies report that interpersonal communication reduces agenda-setting effects,\(^{16}\) while others find that interpersonal communication enhances media effects.\(^{17}\) Lasorsa and Wanta,\(^{18}\) on the other hand, found interpersonal communication to have no effect on the agenda-setting process. These seemingly contradictory findings are probably due to the fact that personal-level (intrapersonal) agendas are sometimes quite different from social-level (perceived


\(^{13}\)Ibid., p. 75-76.


\(^{15}\)Chaffee, op. cit., p. 76.


\(^{18}\)Lasorsa and Wanta, op. cit.
community) agendas. To the extent that these agendas differ, increased interpersonal communication may inhibit media effects. To the extent that they are similar, interpersonal discussion may enhance media effects.

There is evidence that over time increased interpersonal discussion may lead to more similarity between personal-level and social-level agendas. Weaver, Graber, McCombs and Eyal found such a pattern in their year-long panel study of the 1976 presidential election:

As the 1976 campaign wore on and as discussion of politics increased among the voters we studied, the intrapersonal and perceived community agendas became more similar to the interpersonal agenda.20

As mentioned earlier, Mutz21 found that interpersonally communicated information predicted perception of unemployment as both a personal and a social problem, reinforcing the effects of both personal experience and media coverage as she had predicted, but more strongly than her original model suggested. Her findings are consistent with Chaffee's view that interpersonal communication is likely to reinforce, rather than override, the influence of mass media. Rogers and Dearing note that "this finding is entirely consistent with the conclusions from research on the diffusion of innovations, where an individual's exposure to mass media channels often creates awareness of new ideas, but then interpersonal channels are necessary to persuade the individual to adopt the innovation."22

We interpret these findings as evidence of a "bridging" function of interpersonal communication. Not only does interpersonal discussion often reinforce the influence of mass media, but it also connects the personal world with the larger societal world outside the individual's immediate experience — the world "out of reach, out of sight, out of mind" that Lippmann23 referred to and the world so often presented in the mass media. As Mutz puts it, hearing about other people's economic problems can make people "more aware that the problem is shared by others and thus an important social problem, and it may also make them more worried about their own personal situations."24 This bridging function of interpersonal communication was supported in Mutz's study of unemployment.

Based on the literature reviewed above, our second hypothesis is:

2. Interpersonal communication will influence the perception of the importance of drug abuse at both the personal and the social levels.

20Weaver, Graber, McCombs and Eyal, op. cit., p. 156.
21Mutz, op. cit.
24Mutz, op. cit., p. 12.
Research examining the agenda-setting function of the mass media has consistently found that differing amounts of emphasis and coverage of issues by the mass media lead over time to the public regarding these issues to be of differing levels of importance.\textsuperscript{25}

Mutz acknowledges that "to the extent that political behavior is based on perceptions of collective economic conditions, mass media may still play an important role in this process."\textsuperscript{26} That is, the mass media's main effect is likely to be on social-level perceptions. She cites McLeod, Becker and Byrnes\textsuperscript{27} and Becker, McCombs and McLeod\textsuperscript{28} as noting that mass media are typically found to have a greater impact on people's perceptions of the collective salience of issues than on the salience of the issues to individual persons. In other words, because a person has seen a great deal of news concerning some issue does not mean that this person would necessarily perceive the issue as important personally, but the person would be likely to think that the issue is important to others, and thus an important social issue.

Mutz also notes that such patterns have been found in other areas of research on media effects, including studies of media coverage of crime that find such coverage influencing perceptions of crime as a social problem, but not as a personal one.\textsuperscript{29} Another kind of media effects research based on the "third person effect" hypothesis has suggested that a major effect of media exposure is to influence people's perceptions of what others think regardless of whether such exposure influences what individuals themselves think.\textsuperscript{30} These studies suggest that even though an issue may be relatively obtrusive, as are most economic issues, mass media may still have influence on perceptions of these obtrusive issues as "social" problems, if not as personal ones.

Following this argument, our third hypothesis is:

3. Greater exposure to media coverage of drug abuse will lead to
greater concern over that issue as a social problem, but not as a personal problem.

**Personal-Level and Social-Level Perceptions**

Mutz\(^{31}\) found that personal-level perceptions of unemployment influenced social-level perceptions, but not the other way around. She acknowledges that both directions of influence are theoretically possible, but that intuitively one would expect generalizations from personal to social levels to be the dominant influence in economic matters. Based on her finding, our fourth hypothesis is:

4. Personal-level concern about drug abuse will significantly predict social-level concern, but not vice versa.

**The Issue of Drug Abuse**

The issue of drug abuse was selected for this replication of Mutz's\(^{32}\) study for two reasons. We wanted to see if her findings based on the issue of unemployment could be generalized to a non-economic issue. Also, it is a sufficiently salient issue that a sizable proportion of the public would be concerned about it as both a personal and a social problem.

Drug abuse is a well documented social problem. During the period October through December 1989, when our survey was conducted, the drug abuse situation was perceived as becoming worse during the previous year in the state of Indiana by 49% of the 734 persons interviewed, as compared with 10% who thought it had improved. In addition, 40% said they were more worried about the drug abuse problem over the past year than before, as compared with 11% who were less worried, and 48% who said they knew someone who had had problems with drug abuse during the past year. The issue was also prominently covered in five of the largest newspapers around the state during the two weeks prior to the survey interviewing, occupying 16% to 25% of their front page news holes.\(^{33}\)

Recent research also concerned with the coverage of drug-related issues has found that the public concern about drugs has followed the ebb and flow of media coverage. Using data from 43 Gallup polls on the "most important problem facing America today," Shoemaker et al.\(^{34}\) correlated public concern about drugs with 15 years of drug coverage in three newspapers, three television network evening shows and three news magazines. The authors found that "the more the mass media emphasize drugs, the more the public is concerned with drugs as a problem."\(^{35}\)

\(^{31}\)Mutz, 1989, op. cit.
\(^{32}\)Ibid.
\(^{33}\)These newspapers included the Indianapolis Star in central Indiana, the (Gary) Post-Tribune in northern Indiana, the (Louisville) Courier-Journal in the south, the (Fort Wayne) News-Sentinel in the northwest, and the (Terre Haute) Tribune-Star in the west.
\(^{35}\)Ibid., p. 79.
In short, these studies suggest that mass media have played an important role in shaping perceptions of drug abuse as a social problem. However, they provide little evidence about the influences of personal experience and interpersonally communicated information on perceptions of drug abuse as either a social or a personal problem. Further, these studies are at the aggregate, rather than the individual, level. That is, they tend to measure group perceptions of drug abuse as a social problem rather than individual perceptions of drug abuse as either a social or a personal problem.

For the purpose of replication, some modifications to Mutz’s design were made. After a preliminary analysis of the newspaper coverage of drug abuse, we decided not to follow Mutz’s procedure of combining survey questions and newspaper content analysis into a measure of exposure to the mass media because of the similarity of drug coverage in the five prominent newspapers we analyzed for two weeks prior to the survey. Instead, we simply used survey questions as the measure of media exposure. We also added questions on people’s exposure to television news and their attention to the drug abuse stories in newspapers and on television, assuming that these additional questions might measure more thoroughly the way people learn drug-related stories from the media.

The data for this replication study come from a survey of Indiana residents, the same population from which Mutz’s sample was drawn. We commissioned the Indiana University Center for Survey Research to include our questions in its semiannual Indiana Poll. Telephone numbers were randomly generated through the Waksberg/Mitofsky random digit dialing method. At each residential telephone number, an adult over 18 was selected to be interviewed, using the Carter/Trodahl/Bryant procedure. The actual interviews took place from October to December 1989.

The completion rate for this survey was 62%, with 734 cases total. Female respondents accounted for 54.2% of the sample, as compared to 51.5% in the population. The 2.7% oversample of women in our study falls within the maximum sampling error range of plus or minus 3.6 percentage points at the 95% level of confidence.

Our first hypothesis was not supported by our data. Personal experience with drug abuse is not a significant predictor of concern over drug abuse as either a personal or a social problem.

Our second hypothesis regarding the “bridging” function of

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**Methods**

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**Findings**

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36 Because some of the variables in our survey turned out to be very skewed toward the upper or lower end of the measurement scale, we decided to transform those variables with an exponential function so that they would better satisfy the assumption of normal distributions for variables in regression analyses. See F. Hartwig and B. E. Dearing, *Exploratory Data Analysis* (Sage University Paper 16, 1979), p. 60.

interpersonal communication is supported by the significant Betas in the two left columns (OLS procedure) of Table 1. Thus, interpersonally communicated information is found to play a significant role in perceptions of the drug abuse issue at both the social and personal levels, as predicted by our theory of bridging derived from Mutz's and other studies.

Table 1 shows that exposure and attention to mass media coverage of the drug abuse issue do not contribute significantly to perceptions of drug abuse as a social problem. Thus our third hypothesis is not supported. As indicated in column 1 of Table 1, none of the four media variables has a significant effect on issue perceptions at the social level. On the other hand, attention to newspaper coverage of drug abuse does

<table>
<thead>
<tr>
<th>TABLE 1</th>
<th>Predictors of Perceptions of Drug Abuse: OLS and 2LS Regression Coefficients (Standardized Betas) (n = 590)</th>
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<tbody>
<tr>
<td><strong>Perception of Drug Abuse</strong></td>
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<tr>
<td>As a Social Problem</td>
<td>n.a.</td>
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<tr>
<td>As a Personal Problem</td>
<td>.19***</td>
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<td><strong>Sources of Information</strong></td>
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<tr>
<td>Personal Experience</td>
<td>.04</td>
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<tr>
<td>Interpersonal Communication</td>
<td>.12**</td>
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<tr>
<td>Exposure to Newspaper</td>
<td>-.01</td>
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<tr>
<td>Exposure to Television</td>
<td>.01</td>
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<tr>
<td>Attention to Newspaper</td>
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<td>Attention to Television</td>
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<tr>
<td><strong>Community Context</strong></td>
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<tr>
<td>Metropolitan</td>
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<tr>
<td><strong>Party Identification</strong></td>
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<tr>
<td>Republican</td>
<td>.10*</td>
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<tr>
<td>Democrat</td>
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<td><strong>Demographic Controls</strong></td>
<td></td>
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<tr>
<td>Age</td>
<td>.06</td>
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<tr>
<td>Gender (female)</td>
<td>.09*</td>
</tr>
<tr>
<td>Income</td>
<td>.02</td>
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<tr>
<td>Education</td>
<td>-.04</td>
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<tr>
<td>Adjusted R-Square</td>
<td>.09</td>
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</tbody>
</table>

1. Social-level perception is a 5-point scale with higher values indicating the opinion that drug abuse in the state is getting worse.
2. Personal-level perception is a 5-point scale with higher values indicating more concern about drugs in private life.
3. Unstandardized b, with standard error in parenthesis.
4. Variable used as an instrumental variable in 2LS-regression procedure.

* p < .05
** p < .01
*** p < .001
significantly predict perception of drug abuse as a personal problem, and personal-level perceptions of this issue significantly predict social-level perceptions in both the OLS and 2LS analyses. This suggests an indirect effect of newspaper coverage on social-level perceptions.

It is also possible that concern over drug abuse at the personal level leads to paying more attention to newspaper stories about drug abuse, rather than the other way around. As mentioned earlier, some studies have found that those people who are most personally involved with mass mediated issues are also the most sensitive to the media’s agenda.38

In regard to the fourth hypothesis, as columns 1 and 2 in Table 1 indicate, the perceptions of drug abuse as a personal problem significantly influence the perceptions of drug abuse as a social problem, and vice versa, using ordinary least squares (OLS) multiple regression analysis. In other words, the more an individual worries about drug abuse in his or her personal or family life, the more the person sees the drug abuse situation as becoming worse in the state; or the worse the person believes drug abuse is getting in the society, the more he or she is concerned about it as a personal problem.

But the OLS treatment of the predictors of perceptions of drug abuse as a social and a personal problem is open to challenge because there is reason to believe the two issue perception variables are reciprocally related. In this case, a two-stage least squares (2LS) regression analysis is more appropriate to remove the feedback effect of one kind of perception as the dependent variable from the other kind of perception as a predictor.

Based on the results from OLS regression as mentioned above, Mutz used two instrumental variables — personal experience and newspaper exposure — to obtain the estimates of the perception variables. She found that personal-level perceptions, as estimated by personal experience, significantly influence social-level perceptions, but not the other way around.

Because neither personal experience nor exposure to newspaper coverage were significantly correlated with the perception variables in our study, we could not replicate Mutz’s 2LS regression in exactly the same way. Instead, we used those variables that were found in the OLS procedure to be significantly related to the perception variables as instrumental variables in the 2LS procedure. Accordingly, Republican membership and gender (female) are treated in our study as the instrumental variables uniquely identifying social-level perceptions because the OLS regression finds that they are significantly correlated with the social-level perceptions but not with the personal perceptions. Conversely, attention to newspaper coverage is entered as the instrumental variable uniquely identifying personal perceptions.39

As shown in the last two columns in Table 1, the results from the

38Iyengar and Kinder, op. cit., Erbring, Goldenberg and Miller, op. cit., Lasorsa and Wanta, op. cit.

39Interpersonal communication is correlated with both personal and social perceptions of drug abuse. Thus, using interpersonal communication as an instrumental variable would result in an identical estimation for both perception variables.
2LS procedure support Mutz's finding that personal-level perceptions of an issue affect social-level perceptions, but not the other way around. The coefficient for personal perception predicting social perception (2LS b=.53) reaches statistical significance, while the coefficient for social perception predicting personal perception (2LS b=.40) does not. This finding suggests that, when personally affected by unemployment or drug abuse, people tend to generalize the problems to the larger society, whereas perception of these issues as social problems does not significantly predict perceiving them as personal problems.

Attention to newspaper coverage of drug abuse remains a significant predictor of personal-level perceptions in the 2LS regression (2LS beta=.19 vs. OLS beta=.21), further supporting its indirect influence on social-level perceptions. But the bridging effect of interpersonal communication on both the personal-level perceptions and the social-level perceptions becomes nonsignificant, probably due to the reduction in the correlated residuals between the two perception variables.

Figure 2 summarizes our findings regarding the drug abuse issue, compared to Mutz's earlier findings from the unemployment issue in Figure 1. It is clear that we replicate the bridging effect of interpersonal communication on perceptions of drug abuse at both levels (personal and social), as well as the influence from personal-level perceptions to social-level. But our findings do not support the significant direct links between personal experience and personal-level concern, or between media coverage and social level concern. Instead, we find an indirect link between newspaper coverage and social-level concern through personal-level concern.

Why is interpersonal information more important than any other source of information in predicting perceptions of drug abuse at both personal and social levels? The answer probably lies mostly in the nature of the drug abuse issue. Drug abuse is obtrusive for about half of the
residents of Indiana (48% in our survey claim to have known someone who has had problems with drug abuse during the past year) compared to more than 20% in Mutz's study who reported either themselves or someone in their family personally affected by unemployment during the past year. Also, drug abuse is likely to be regarded as a more serious problem than unemployment (76% in the August 1989 Washington Post-ABC News poll\(^{40}\) favored increased federal spending on the anti-drug program compared with 30% who favored increased spending on unemployment insurance), and a problem that is social rather than economic — and therefore not as easily linked to specific government policies.

But even though our data regarding the drug abuse issue do not fully support Mutz's general model, we do find support for a "bridging" function of interpersonal communication that links personal-level and social-level perceptions of an issue, just as she did for the unemployment issue two years earlier. We also find support for a generalizing of personal-level concern to social-level concern, rather than vice versa.

Further testing with different kinds of issues should be carried out to test the generalizability of this bridging function of interpersonal communication in agenda-setting, and to specify the conditions under which bridging is more or less likely to occur. Such studies could also help us learn more about the influences of different kinds of information sources on issue perceptions.